

PLANSFM

NATFOREX

Establishing a national resource of field trials and a database for forest research and demonstration

PROJECT TEAM

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BACKGROUND

Years of forestry research have resulted in an extensive network of experimental trials on many aspects of silviculture and forest management. These trials have provided scientific data to assist in developing best forest practice and have also acted as demonstration areas for communicating research results. The NATFOREX project aims to create a national database of trials established to date. The project will give a useful inventory of the resources available and silvicultural and management treatments tested. It will also facilitate reviews of knowledge gained to date and help to show areas where new trials may be required.

OBJECTIVES

To maintain and manage a national network of field trials for the study of silvicultural and forest management treatments. Specifically to:

- evaluate the relevance of existing trials in the Coillte experimental plot network and in the research sections of other organisations;
- decide on the feasibility of analysing existing data and on the benefits of further data collection;
- decide on the need to establish new trials;
- carry out necessary maintenance on field trials;
- collect new data in trials where required;
- integrate the findings and data from the trials into a public online database.

PROGRESS

In the last year the focus has been on developing methods on how the project data are collected. A list of 1,500 field trials established by state forestry and other organisations has been compiled. This list is the basis for all investigations in the project. A secure intranet site has been set up to store metadata about the field experiments. A project management group has been established to advise on the retention of field trials and inclusion in the database. An advisory group met during the year and contributed to the longer-term direction of the project.

Part of the intranet development includes an early warning system that will alert the project to potential loss of trial sites. A number of sites were found to be part of the forest stands offered for sale as thinnings or clearfell areas under Coillte's marketing system. This risk was highlighted in the database communicated to Coillte's Forest Information System. A



NATFOREX project team, management group and advisory group.



Tablet computer used to report on field trials by creating high resolution digital maps.

number of site visits were carried out to establish a practical reporting system to be used in deciding the status of experiments. One site was visited by the project management group so that they could appreciate the difficulties encountered by the project team in assessing a site. To date, in excess of 100 trials have been reviewed and reports on these are being compiled. Up to 500 trials have been documented in the NATFOREX database.

A new tablet computer is used to report on field trials by creating high resolution digital maps. This work has been supported by Coillte IT. The company provided shape files: these are geospatial vector data, consisting of different layers of information about a field site, such as forest roads, forest compartments and experiment plot layers. Data recovery was completed during the year. Old computers and storage media have been checked for data, many were damaged and about a third of the corrupt disks were recovered.

ACTIVITIES PLANNED

The design of the NATFOREX internet site including an online database will be completed and populated with experiment records. A number of trials will be approved by the project management group for retention and the associated raw data will be entered into the database. Other (non-Coillte) stakeholders will be invited to contribute to the project. A statistician will be appointed to provide advice on the design of trials and quality of available data. Field reports on remaining intact Coillte trials will continue to be submitted to the project management group and an outline of research areas where retention of trials is recommended will be drawn up.

OUTPUTS

Harper, C. 2008. *NATFOREX - establish a national resource of field trials and a database for forest research and demonstration*. University College Dublin. NATFOREX Brochure.

Nieuwenhuis, M. 2007. NATFOREX – a national data base of forest experiments and research. *Irish Timber and Forestry* 16 (4):20-24.

Liaison with the R&E section of Coillte for IT requirements was carried out in 2008, to set the process in motion to have trials retained under the NATFOREX project recognised in Coillte's GIS.

Nieuwenhuis, M. 2008. NATFOREX – Establishing a national resource of field trials and a database for forest research and demonstration. *COFORD Forestry and Wood Update* 8(12): 2-3.

Cullinan, C. and Nieuwenhuis, M. 2008. NATFOREX – *Establishing a national resource of field trials and a database for forest research and demonstration in Ireland*. In: Karlsson, K. (Ed.) *Proceedings of the NoLTFoX meeting, Edinburgh, Scotland (5 – 6 June 2008)*. <http://www.metla.fi/julkaisut/workingpapers/2008/mwp105.pdf>

Current Internet Presence

<http://coillteconnect/sites/natforex/default.aspx>

www.ucd.ie/research/publications/20062007/lifesciences/schoolofbiologyenvironmentalscience/

http://www.coford.ie/iopen24/pub/defaultarticle.php?cArticlePath=196_421_425_453

http://www.coford.ie/iopen24/pub/defaultarticle.php?cArticlePath=141_483 (NATFOREX mentioned in the Silviculture scoping paper)

<http://www.ucd.ie/forestry> website describing NATFOREX in the context of the PLANSFM research programme (due for launch in March 2009).